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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/720,230	12/19/2000	Herman Wouter Van Rump	ITOM001128	9268

23662 7590 08/06/2004

ROBERT M. MCDERMOTT, ESQ.
1824 FEDERAL FARM ROAD
MONTROSS, VA 22520

EXAMINER

LE, LANA N

ART UNIT	PAPER NUMBER
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2685

DATE MAILED: 08/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/720,030

Applicant(s)

HUMPHREY ET AL.

Examiner

Lana N Le

Art Unit

2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-12 and 16-30 is/are allowed.
- 6) ☒ Claim(s) 13 is/are rejected.
- 7) ☒ Claim(s) 14, 15 and 31-44 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/19/2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

line 8 of the abstract contain the word ---said---.

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or

Art Unit: 2685

REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a).
"Microfiche Appendices" were accepted by the Office until March 1, 2001.)

(e) BACKGROUND OF THE INVENTION.

(1) Field of the Invention.

(2) Description of Related Art including information disclosed under 37
CFR 1.97 and 1.98.

(f) BRIEF SUMMARY OF THE INVENTION.

(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).

(h) DETAILED DESCRIPTION OF THE INVENTION.

(i) CLAIM OR CLAIMS (commencing on a separate sheet).

(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A
"Sequence Listing" is required on paper if the application discloses a
nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if
the required "Sequence Listing" is not submitted as an electronic
document on compact disc).

Headings of each part of the specification should be labeled as in the format
below, i.e. Field of the Invention, Background of the Invention, Summary of Invention,
Brief Descriptions of the Drawings, and Detailed Description of the Preferred
Embodiment, Claims, Abstract of The Disclosure. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sears
(US 6,122,492) in view of Janning (US 6,166,643) and further in view of Waraksa et al
(US 5,515,036).

Art Unit: 2685

Regarding claim 13, Sears discloses a communication device including a power amplifier for amplifying a modulated high frequency carrier input signal comprising a resonance circuit arranged between resonance circuit input means and antenna means 112A, 112B characterized in that the resonance circuit input means comprise an excitation circuit 101 for a periodic excitation of the resonance circuit phase and/or frequency coupled with the modulated high frequency carrier signal. Sears didn't further disclose the power amplifier comprising a resonance circuit arranged between resonance circuit input means and antenna means and the periodic excitation substantially occurring with a duty cycle less than 50% the device is characterized in that the excitation circuit comprises a charge pump supplying an excitation current signal, phase and/or frequency coupled with the modulated carrier signal circuit 104 having continuous transients between a minimum and a maximum current level, and increasing above a threshold current level within the excitation periods.

Janning further discloses a resonant circuit 40 between the resonant circuit input means 42 and antenna means 44 (fig. 2b; col 13, lines 45-61), the periodic excitation substantially occurring with a duty cycle less than 50% (col 17, lines 17-37). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the periodic excitation occurring with a duty cycle less than 50% in order to improve the efficiency of the power amplifier and to reduce phase errors, the device is characterized in that the excitation circuit 101 comprises a charge pump supplying an excitation current signal (current drive pulses), phase and/or frequency coupled with the modulated carrier signal circuit 104 having continuous transients between a minimum

Art Unit: 2685

and a maximum current level while the current drive pulses is being supplied (col 18, lines 43 – col 19, line 2; col 20, lines 8-13), and increasing above a threshold current level (to a high current level) within the excitation periods (col 17, lines 38-45).

Janning and Sears didn't further disclose: the device is characterized by said excitation occurring within excitation periods (Tex) in a periodic alternation with resonation periods (Tfre); during which the resonance circuit is in free running resonance mode, the excitation periods being smaller than the resonation periods.

Waraksa et al further discloses the device is characterized by said excitation occurring within excitation periods (Tex) in a periodic alternation with resonation periods (Tfre); during which the resonance circuit is in free running resonance mode, the excitation periods being smaller than the resonation periods (col 16, lines 57- col 17, line 7). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the excitation occurring within excitation periods in a periodic alternation with the resonance periods in order to time the excitation drive signal to happen in the same peak area as the sinusoidal carrier signal.

Allowable Subject Matter

2. Claims 14-15, 31-44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
3. Claims 2-12, 16-23, 24-30 are allowable over the cited prior art.

Art Unit: 2685

4. The following is an examiner's statement of reasons for allowance:

Regarding independent claims 2, 5, 6 they contain the objected subject matter from the previous office action and are therefore allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lana N Le whose telephone number is (703) 308-5836. The examiner can normally be reached on M-F 10-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F Urban can be reached on (703) 305-4385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2685

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Lana Le', with a stylized flourish at the end.

Lana Le

July 26, 2004